

NEW SPECIES AND VARIETIES OF *STYLIDIUM* FROM WESTERN AUSTRALIA

by

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Since C. A. Gardner described two large West Australian *Stylidium* species in 1942 (*J. Roy. Soc. W. Aust.* 27:198), no additions to this genus appear to have been published; but it is evident that a considerable number of the smaller representatives remain unknown and still await definition. The following descriptions of nine new species and two new varieties are a step toward the complete revision of *Stylidium* in Australia, which one of us (R.E.) contemplates publishing as a separate monograph, and we have followed the arrangement of J. Mildbraed in *Stylidiaceæ* [*Das Pflanzenreich IV*, 278, Heft. 35 (1908)]. Seven of the new species are in the Section *Despectæ*, constituting a remarkable enlargement of this small group; one is in the Section *Saxifragoideæ*, while the ninth additional species belongs to the *Repentes* Section—although closely resembling *S. repens* in habit of growth and foliage, it has flowers that differ markedly in their column structure. The new varieties of *S. repens* and *S. adpressum* are local forms of rather variable plants. Except for *S. zeicolor* and *S. repens*, the only collections at present known of all these novelties are those made by one of us (R.E.) since 1951, and the type material has been shared between the National Herbarium of Victoria (at South Yarra), State Herbarium of Western Australia (at Perth), and Herbarium of the Royal Botanic Gardens at Kew (England)—the abbreviations used for these institutions are MEL, PERTH and K respectively.

We are indebted to Mr. Tarlton Rayment of Sandringham, Vic., for the identities of all insects captured from flowers of sundry *Stylidia*.

1. *S. BOLGARTENSE* Erickson & Willis, *species nova*. [Tab. I, 1-7].

Annua circiter 8 cm. alta; folia radicalia rosulataque, pauca, spatulata, circ. 7 mm. longa; flores 1—3, pedicellati, comparate magni (corolla usque ad 15 mm. lata, dilutissime carnea); faucis appendiculae variabiles, sed semper 2 magna dentiformes adsunt; labellum anguste lanceolatum, circ. 2 mm. longum.

Species *S. petiolaris* Sond. in Lehm. (Sectionis *Despectæ*, basi bulbosa et petalis inæqualiter biseriatis) proxima, sed ab hac et aliis speciebus cognatis differt; petalis 2 erectis parvissimis, petalis 2 inferioribus magnis latissime dilatatis atque corollæ tubo longiore.

Small glabrous plant, about 8 cm. tall (or more), with a bulb-like stock. *Leaves* basally rosetted, few, dark-green, glabrous and rather fleshy, almost orbicular, with long slender petioles. *Scape* dark-coloured, flowers 1—3 on pedicels two or three times longer than the calyces; floral bracts green, fleshy and blunt, bracteoles smaller, often paired. *Calyx* green, twisted, turbinate, glabrous, about 8 mm. in length including lobes; lobes

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free, blunt, a little shorter than the calyx tube. *Corolla* whitish; tube longer than calyx lobes; petals very unequal, the upright pair almost minute, oblong, sometimes with a tooth on the outer edge, the extended petals about four times as long, broadly rounded at the extremities and narrow at the base; throat appendages variable, usually 2, prominent and dentiform, located at the bases of the larger petals and appearing half as large as the smaller petals, sometimes with two similar additional appendages; labellum about 2 mm., narrow and pointed, without appendages. *Column* short, dark and strong, somewhat taller than the small upright petals; stigma developing into a rolled hairy lip.

Pollination by the fly *Comptosia carculum* Newm. (Family *Bombyliidæ*, Subfamily *Lomatiinæ*).

Epithet in allusion to the locality of collection.

Vernacular name: "Pinafore Trigger-plant".

Habitat: In a pocket of sodden, washed soil, near the bottom of a small gully, in open Wandoo (*Eucalyptus wandoo* Blakely) forest, in compact colonies.

Representative locality: WESTERN AUSTRALIA — Bolgart, in Colin Haynes's "poison paddock" (HOLOTYPE and PARATYPES in MEL, ISOTYPES in K and PERTH—*Rica Erickson*, 11 Sept. 1951).

The new species is in the *S. petiolare* group of the *Despectæ* Section (bulbous stock and unequal petals) differing in its exceedingly small upright petals (pointed and almost as long as the extended petals in *S. petiolare*), very broadly dilated extended petals, and 2 prominent dentiform throat appendages (6 in *S. petiolare*).

2. *S. ASTEROIDEUM* Erickson & Willis, *species nova*. [Tab. I, 8–13].

Annua pusilla, gracilis, usque ad 8 cm. alta; folia rosulata, pauca, anguste linearia, circ. 6 mm. longa, "stellulas" formantia; flores 1 vel 2, pedicellati, com parate magni (corolla usque ad 10 mm. lata, pallide carnea); labellum anguste ovatum, 1.5–2 mm. longum, apice longo calycis lobos subaequante.

Species ex affinitate *S. petiolaris* Sond. in Lehm., sed differt: caulibus gracilioribus, foliis linearibus, calycis lobis obtusis, corollæ faucis appendiculis 2 gibbosis (6 in *S. petiolaris*).

Small, slender, glabrous plant up to 8 cm. tall, with a bulb-like stock. *Leaves* basally rosetted, few, narrow-linear, about 6 mm. long. *Scape* dark-coloured, very fine, 1- or 2-flowered; pedicels much longer than calyces, with a few glandular hairs; floral bracts and paired proleaves blunt, minute, a bract lower on scape, scarcely larger. *Calyx* greenish, twisted, turbinate, glabrous, about 4 mm. in length including the lobes; lobes free, blunt, almost as long as the tube. *Corolla* pale pink, fading quickly to whitish, tube about as long as calyx lobes; petals unequal, upright pair small, narrow and curved but not pointed, the extended pair about twice as long and broad, dilated at the extremities; throat appendages 2, forming prominent humps at the bases of the larger petals; labellum narrowly oval, fleshy, with a long point. *Column* pale, short, about equal to the smaller petals.

Epithet in allusion to the star-like rosette of leaves.

Vernacular name: "Star Trigger-plant"

Habitat: Amongst sodden moss over rock, on a hillslope above the creek at Toodyay Road.

Representative locality: WESTERN AUSTRALIA — Clackline (HOLOTYPE in MEL—*Rica Erickson*, 14 Sept. 1952).

The new species is near to *S. petiolare* but is more slender and differs in the shape of leaves, throat appendages and calyx lobes. (In *S. petiolare* leaves are ovate, throat appendages 6 and dentiform, calyx lobes pointed).

3. *S. RUBRICALYX* Erickson & Willis, *species nova*. [Tab. I, 14-21].

Annua circiter 8 cm. alta; folia rosulata, pauca, oblanceolata, circ. 10 mm. longa; flores 1 vel 2, longe pedicellati, comparate magni (corolla circ. 10 mm. lata, albida, contra calycem rubram valde eminens); labellum anguste lanceolatum, circ. 2 mm. longum.

Species *S. petiolaris* Sond. in Lehm. proxima, sed differt: bracteis verticillatis infra inflorescentiam, calycis lobis obtusis, et præcipue corollæ faucis appendiculis quarum 2 minutæ quum 2 prominente gibbosæ bifidæque sunt (cf. 6 appendiculæ æquales in *S. petiolaris*). *S. emarginatum* Sond. in Lehm. etiam bracteas verticillatas habet, sed corolla albido-flavescenti rubro-striata et faucis appendiculis 6 æqualibus distinguitur.

Small glabrous plant about 8 cm. tall, with a bulb-like stock. *Leaves* basally rosetted, few, oblanceolate, green, glabrous, somewhat fleshy, about 10 mm. in length. *Scape* 1- or 2-flowered, dark reddish, glabrous, with a few red, blunt, verticillate bracts below the flower or inflorescence; pedicels longer than the calyces, sparsely glandular-hairy at the bases, with or without bracteoles. *Calyx* bright reddish, twisted, turbinate, the blunt lobes almost equal in length to the tube, connate to above half their length, bilabiate. *Corolla* whitish; tube longer than calyx lobes; petals very unequal, the upright pair about half the length and very narrow, the extended pair widening at the extremities; throat appendages consisting of 2 prominent bifid humps (appearing as 4) at the bases of the larger petals, and 2 minute teeth at the bases of the smaller petals; labellum narrowly lanceolate, about 2 mm. long. *Column* dark, strong, somewhat longer than the smaller petals, stigma developing into a rolled hairy lip.

Pollination by a small native bee (unidentified), also visited by a fly of the genus *Lomatia* (Subfamily *Lomatiinæ*).

Epithet in allusion to the red calyx.

Vernacular name: "Apron Trigger-plant".

Habitat: On a reedy creek flat in association with *S. rhipidium*.

Representative locality: WESTERN AUSTRALIA — Approximately half mile south of 120 mile post, Albany Highway, south of Williams (HOLOTYPE in MEL, ISOTYPES in K and PERTH—*Rica Erickson*, 30 October 1952).

This species is in the *S. petiolare* group, near *S. bolgartense*, but differs in the partly connate lobes of the calyx, the presence of verticillate bracts below the inflorescence, and in the throat appendages (6 equal in *S. petiolare*, 2 in *S. bolgartense*). *S. emarginatum*, the only other bulb-like species with verticillate bracts, has 6 equal throat appendages and flowers yellow with red stripes on the outside, also the petals are more equal in length, with lobes and notches in the apical half.

4. *S. PERISCELIANTHUM* Erickson & Willis, *species nova*. [Tab. II, 1-8].

Annua gracilis, 6-15 cm. alta; folia rosulata, circiter 8, spathulata, circ. 10 mm. longa; flores racemosi, circ. 10, pedicellis brevibus, parvi (corolla circ. 5 mm. lata, rosea); calyces lineares, faucis appendiculæ 6, ad apices sanguineæ; labellum minutum, oblongum, valde apiculatum.

Species valde affinis *S. pulchello* Sond. in Lehm. (quod, ob flores plures parvos corymbosos, in sectione *Despectæ* unicum fuerat), sed differt: calyce longiore angustioreque, petalis coloratis parvioribus subæqualibus, et faucis appendiculis 6 (cf. 2 in *S. pulchello*).

Small slender plant 6-15 cm. tall, with a bulb-like stock. *Leaves* basally rosetted, about 8, glabrous, spathulate, on long petioles, about 10 mm. long. *Scape* racemose, bearing 10 or more flowers, slender, dark-reddish, usually with one or two small blunt bracts below the slightly glandular inflorescence, pedicels shorter than the calyces, glandular, floral bracts pointed and narrow, smooth, reaching as far as the minute, pointed, paired bracteoles near the bases of the calyces. *Calyx* greenish-red, linear, glabrous except at the base; lobes free, pointed, much shorter than the tube, the margins minutely serrate. *Corolla* small, about 5 mm. wide, bright pink with white throat, tube about equal to the calyx lobes; petals very unequal, the small upright pair narrow, a little curved, rather blunt, about half as long as the broad extended petals; throat appendages 6, toothed, with crimson tips; labellum minute, fleshy, almost oblong, with a long point. *Column* dark and strong, about as long as the small petals.

Pollination by the fly *Comptosia cuneata* Ed. (Family *Bombyliidæ*, Subfamily *Lomatiinæ*).

Epithet in allusion to the resemblance of the corolla to a figure in long baggy "pants".

Vernacular name: "Pantaloon Trigger-plant".

Habitat: Along wet flats by creeks or swamps, in compact colonies.

Representative localities: WESTERN AUSTRALIA—Cranbrook (Oct.); Youngs Siding (Oct.); Bolgart (HOLOTYPE in MEL, ISO-TYPES in K and PERTH—*Rica Erickson*, Sept. 1952).

A very constant species over a wide area. The bulb-like stock and the form of the corolla apparently places it in the *S. petiolare* group; but the new species differs markedly in its spike-like raceme and long narrow calyx, marking its closer affinity to *S. pulchellum* which has paniculate scape and linear-oblong calyx. This latter species, however, has small white flowers on long pedicels, petals almost equal, and 2 throat appendages.

5. *S. RHIPIDIUM* Erickson & Willis, *species nova*. [Tab. II, 9-16].

Annua pusilla, gracilis, circiter 5 cm. alta; folia rosulata, pauca, minuta, suboblonga; flores 1 vel 2, pedicellati, comparate magni (corolla circ. 7 mm. lata, alba, flabellata); faucis appendiculæ 6, valde capitatae; labellum minutum, ovatum, carnosum.

Species prope *S. utricularioidem* Benth. (Sect. *Despectæ*) quod præcipue petalis roseis subæqualibus et faucis appendiculis 4 linearibus, haud capitatis, recedit.

Small, slender, slightly glandular-hairy annual about 5 cm. tall. *Leaves* few, basally rosetted, about 2-4 mm. long, smooth, reddish, almost oblong, the blade slightly thickened. *Scape* 1- or 2-flowered, dark-coloured, very slender, sparsely glandular-hairy throughout; bracts 2 or more, lanceolate, glabrous, green, one of them halfway along the scape. *Calyx* greenish-red, oblong and twisted, slightly glandular, lobes shorter than the tube, two of them connate almost to the apex, total length under 5 mm. *Corolla* white, fan-shaped, the larger petals 5-6 mm. long, narrow at the base and gradually widening, the lesser petals rounded, about 2 mm. long and flanking the larger; throat appendages 6, plainly capitate; labellum minute, ovate, fleshy, shortly pointed, without appendages. *Column* pale, short and slender, with black anthers.

Epithet in allusion to the form of the corolla.

Vernacular name: "Fan Trigger-plant".

Habitat: On a reedy creek flat in association with *S. rubicalyx*.

Representative locality: WESTERN AUSTRALIA — Approximately half mile south of 120 mile post, Albany Highway, south of Williams (HOLOTYPE in MEL, ISOTYPES in K and PERTH—*Rica Erickson* 30 October 1952).

The new species differs from the *S. petiolare* group of *Despectæ* in the absence of a bulbous root-stock, and is distinct from the *S. despectum* group in its fan-shaped corolla and 6 *capitate* throat appendages.

6. *S. EXOGLOSSUM* Erickson & Willis, *species nova*. [Tab. II, 17-23].

Annua gracilis, 3-15 cm alta, simplex aut ramulis paucis; folia rosulata, pauca, minuta, ovato-lanceolata, ante anthesin marcescentia; flores 1-16, subsessiles, in cymis laxè dispositi (nisi solitarii); corolla circiter 7 mm. lata, carnea aut alba, ad faucem rubri-maculata; faucis appendiculæ 2, parvissimæ, rubræ (appendiculæ duæ aliæ minutæ interdum adsunt); labellum in tubo corollæ extrinsecus affixum, conspicuum, circ. 1.5 mm. longum, obtusum, ad basin carnosum, ad apicem roseo-petaloideum.

Species prope *S. despectum*, sed ab hac et aliis speciebus in Sectione *Despectæ* ob positum exteriorem labelli certe differt. (Hic character, quanquam in speciebus meridionalibus unicus est, etiam in formis paucis e regionibus calidis adest.)

Small glabrous annual from 3-15 cm. tall, green and reddish-coloured, either simple-stemmed or branching a little, roots small and few. *Leaves* basally rosetted, few, withering early in the flowering stage, glabrous, ovate to bluntly lanceolate, 2-5 mm. long; stem bracts about 3, scattered, small and blunt, upper bracts larger (2 mm.), more pointed at the junction of the branches to the main stem, floral bracts 1 mm.

long, blunt, opposite the flowers. *Scape* cymose, or simple, or single-flowered, the branches springing from both sides of the terminal flower and bearing up to 16 blooms, which are loosely spaced, alternating, and almost sessile. *Calyx* narrowly oblong or broadly linear, with very few glandular-hairs; lobes free and narrow, a little shorter than the tube, total length about 5 mm. *Corolla* about 7 mm. wide, pink or whitish, with red spots at the throat; petals almost oblong, paired sideways, the larger petal in each pair about 3.5 mm., the smaller petal less than 3 mm.; throat appendages usually 2 at bases of large petals, red, very small, toothed, sometimes also with 2 minute appendages at the bases of the smaller petals; labellum oblong, about 1 mm. or more, inserted on the outside wall of the corolla tube, fleshy at the base but petal-like and pink at the apex, blunt and fairly conspicuous. *Column* short. *Capsule* linear, 7 mm. long, valves recurved. *Seeds* minute, numerous.

Epithet in allusion to the position of the labellum.

Vernacular name: "Tongue Trigger-plant".

Habitat: In a drying black swamp with Pitcher-plants, also in sandy seepage on low heath (by the side of Marine Drive, Albany).

Representative localities: WESTERN AUSTRALIA — Swamps about 2 miles west of Albany aerodrome (HOLOTYPE and PARATYPES in MEL, ISOTYPES in K and PERTH—*Rica Erickson*, 13 January 1953; Albany, by Marine Drive (*Rica Erickson*, December 1952).

The new species in its inflorescence resembles some tropical species, especially in the fruiting stage, but is even more remarkable for the labellum being placed on the outside wall of the corolla tube—a feature of several tropical forms, but unique among temperate species. In other details it is close to *S. despectum*.

7. *S. XANTHOPIS* Erickson & Willis, *species nova*. [Tab. III, 12-20].

Annua gracilis, 4–10 cm. alta, sæpe paulum ramosa, per totum parce glandulo-pilosa. (præter foliorum glabrorum); caudex parvus, brevis, albus et carnosus; folia 3–5 mm. longa, rosulata, congesta, crassa, ± linearia, obtusa; flores usque ad 10, irregulariter laxè corymbosi; calyx linearis, circiter 8 mm. longus, lobis obtusis quam tubus multo brevioribus; corolla expansa circ. 1 cm. lata, vivide rosea sed fauce conspicua flava; petala subrotunda, unguibus latis brevibus, 3–4 mm. longa, eorum 2 notis sanguineis et 2 vittis albis prope bases; faucis appendiculæ 6 minutæ, breves, obtusæ verruciformes; labellum perminutum, longe-deltaideum, non-appendiculatum.

Ab omnibus aliis speciebus Sectionis *Despectæ* hæc differt colore insigni corollæ atque petalis comparate magnis latisque; simulat *Levenhookiam leptantham* quacum concrevit.

Small plant, often branching, green and red, 4–10 cm. tall, sparingly glandular-hairy throughout (except for the glabrous leaves), with a small, fleshy, white (but not bulb-like) stock. *Leaves* rather densely crowded in a basal rosette, glabrous, fleshy, ± linear and blunt, 3–5 mm. in length. *Scape* firm, usually with comparatively long branches bearing up to 10 pedicellate flowers in an irregular corymb, with floral bracts at

the junction of the branches and pedicels, and often with a single lanceolate bract lower on the scape. *Calyx* linear, about 8 mm. in length; the lobes much shorter than the tube, blunt, two of them connate for more than half their length. *Corolla* about 1 cm. wide, bright pink, with a conspicuous yellow throat, the tube shorter than the calyx lobes; petals rounded, on short broad claws, spreading, with dark red marks near the bases of two and with white bands at the bases of the remaining two; throat appendages 6, blunt and short, wart-like; labellum very small, long-triangular, without appendages. *Column*, slender, longer than the petals; pollen bright cobalt-blue; stigma rounded and cushion-like.

Epithet in allusion to the yellow "eye" of the flower.

Vernacular name: "Yellow-eyed Trigger-plant".

Habitat: In pockets of soil near the base of a large outcrop of rock.

Representative locality: WESTERN AUSTRALIA — Pinnacle Rock near Pindewa Station, about 25 miles north of Morawa (HOLOTYPE in MEL, ISOTYPES in K and PERTH—*Rica Erickson*, 8 Sept. 1953).

The new species is in the *S. despectum* group, but differs strikingly from all others in its remarkable corolla shape and colour, bearing a strong likeness to *Levenhookia leptantha*, with which it was found (also in the company of *L. pusilla*, *S. petiolare* and *S. calcaratum*).

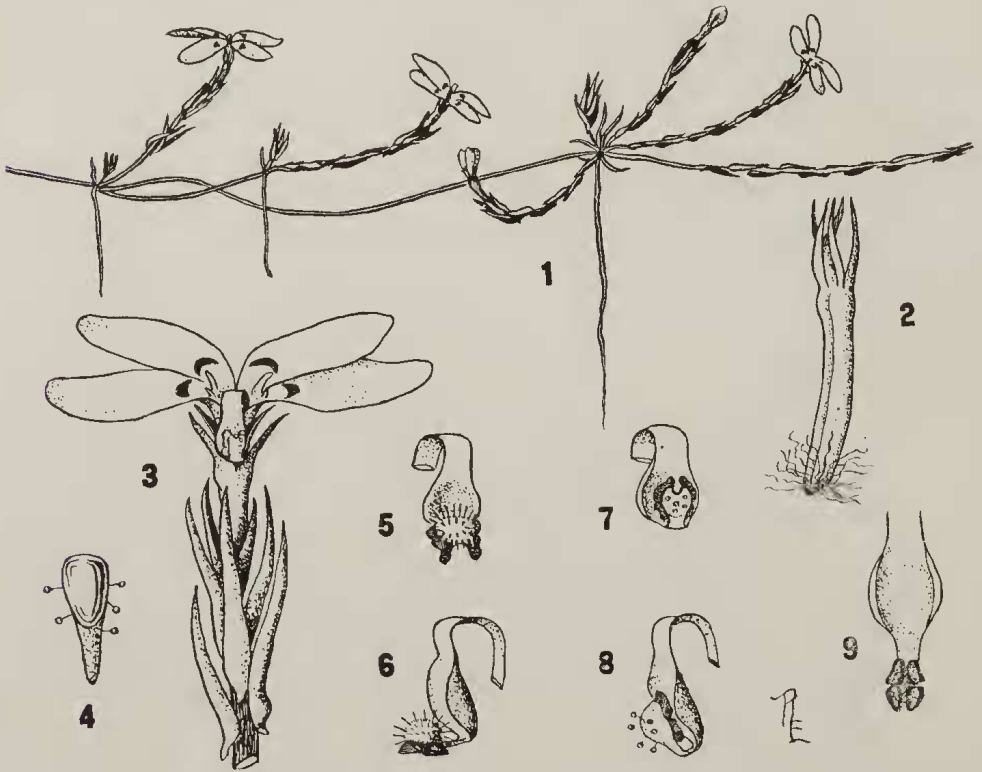
8. *S. SACCATUM* Erickson & Willis, *species nova*. [Text. fig. 1-9].

Perennis inconspicua, usque ad 5 cm. ascendens, stolonifera, innovationibus filiformibus valde elongatis: folia glabra, linearia, 5-6 mm. longa, imbricata, apicem versus conferta; flores solitarii, sessiles; petala circiter 5 mm. longa, pallide carnea, quodque ad basin macula rubra præditum; labellum minutum, subtriangulum, carnosum, pilis paucis glandulosis fimbriatum; faucis appendiculæ 4, parvissimæ, dentiformes.

In habitu facieque *S. repentem* R.Br. (quocum sæpe concrescit) valde simulat; sed floribus sessilibus, calycis lobis sublinearibus liberis, corollæ faucis appendiculis parvis aut imperfecte formatis, et præcipue columna sub apicem *manifeste sacculata* differt. *S. verticillatum*, *S. scandens* atque *S. trichopodum* (Queensland) etiam columnas sacculatas possident, sed in modis multis aliis facile distinguuntur. *S. breviscapum* flores sessiles, calycem sat similem et faucem nudam habet, sed differt: foliis multo longioribus obtusis atque floribus subverticillatis capitulum densum formantibus.

Stoloniferous and rather inconspicuous matted perennial, the innovations borne on dark rigid wiry roots (to 8 cm. long). *Stems* ascending 3-12 cm. long, very slender and wiry, grey, glabrous, leafless in the older parts; new roots and stems arising from loose rosettes of the previous season. *Leaves* scattered along the stems, but becoming congested toward the apices where they form dense terminal clusters (about 10 together), 5-6 mm. long, erect, appressed, lanceolate with fine mucro, rather fleshy with scarious incurved margins and a basal spur (as in *S. repens* R.Br.); terminal leaves slightly longer and less tightly appressed than stem leaves which are shed late in the season. *Flowers* solitary and sessile within the terminal leaf clusters. *Calyx* reddish, almost linear, curved, about 10 mm.

long, slightly glandular-hairy above and woolly at the base with long, white, silky, glandless hairs; lobes free, linear acuminate, about 3 mm. long (much shorter than tube), finely ciliate on the margins. *Corolla* whitish or pale pink, with a red spot at the base of each petal; tube scarcely as long as the calyx lobes; petals almost equal, about 5 mm. long, rounded oblong and paired sideways; labellum minute, almost triangular, with a long apex, fleshy, fringed with a few glandular hairs; throat appendages 4 (at bases of the larger petals), small and rudimentary, dentiform. *Column* short and stout, dilated below the apex, with the margins curved inward to form a pouch into which the anthers are folded by an elastic hinge; stigma rotund and prominently cushioned.



Figs. 1—9, *Stylium sacculatum*: 1, Habit; 2, Calyx; 3, Terminal rosette of leaves and flower; 4, Labellum; 5, Front view of column with mature stigma; 6, Side view of column with stigma; 7, Front view of column showing anthers folded into pouch; 8, Side view of column and anthers; 9, View of pouched column with anthers held open.

Pollination by the flies *Comptosia cuneata* Ed. and *C. carculum* Newm. (Family *Bombyliidae*, Subfamily *Lomatiinae*), also visited by an ant of the genus *Iridomyrmex*.

Epithet in allusion to the pouched column extremity.

Vernacular name: "Locket Trigger-plant".

Habitat: In open Wandoo (*Eucalyptus wandoo* Blakely) forests and the adjacent sand-plains, forming extensive mats often in association with *S. repens*.

Representative localities: WESTERN AUSTRALIA — Bolgart Yericoin; Piawaning (HOLOTYPE in MEL, ISOTYPES in K and PERTH—*Rica Erickson*, 7 October 1952).

The new species closely resembles *S. repens* in general appearance, but differs markedly in having sessile flowers, linear calyx (turbinate in *S. repens*) with free lobes, narrow pointed glandular labellum and 4 rudimentary throat appendages (conspicuous and varying from 2–8 in *S. repens*). The calyx is nearer to that of *S. breviscapum* except in the lobes which are blunt in the latter species. The most notable character, however, is the pouched column—a rare modification found also in *S. verticillatum* and *S. scandens* of W.A., as well as in *S. trichopodium* of Queensland.

9. *S. REPENS* R.Br. *var. DIPLECTROGLOSSUM* Erickson & Willis, *varietas nova*.

A forma speciei usitata differt: calyce minore glanduloso-pubescenti, lobis longioribus angustioribusque (tubum æquantibus) semper liberis, et præcipue labello quod ad basin calcaria duo filiformia fert.

Differing from the typical and usual form of the species in having longer, narrower, leaf-like, free (*not connate*) calyx lobes and especially in the possession of two long, fine, divergent appendages at the base of the labellum. TYPE from the plains between Kendenup and Mondurup Peak in the Stirling Range (HOLOTYPE in MEL, ISOTYPE in PERTH—*C. Morris*, November, 1953).

10. *S. ZEICOLOR* Erickson & Willis, *species nova*. [Tab. III, 1-11].

Perennis caespitosa, usque ad 35 cm. alta, interdum pluriscaposa; caudex brevis, ligneus, in radicibus pluribus nigrantibus portatus; folia usque ad 5 cm. longa suberecta, graminiformia linearia et manifeste canaliculata acuta, superficiebus parce glandulo-pilosis; flores 15–40 in racemis latis, graciliter pedicellati; calyx linearis, circiter 8 mm. longus (tubo lobisque subæqualis), glaber; corolla siccans cremeo-flava (ut in granis *Zea mays* colorata), tubo quam lobi calycis multo brevior; petala subæqualia, circ. 6 mm. longa; rotundo-oblonga, lateraliter jugata; faucis appendiculæ 6, minutæ, dentiformes, interdum breviter pilosæ (earum 2 inter glandes tres aures siti sunt); labellum ovale, longe acuminatum, ad basin appendiculis duobus gracilibus instructum; semina minuta, 0.3–0.35 × 0.1–0.2 mm., ellipsoidea, nubilo-olivacea, subpapillosa.

Species affinis *S. lineato* Sond. in Lehm. (Sect. *Saxifragoideæ*) quod foliis rosulatis planis latis obtusisque certe recedit.

A tufted perennial, sometimes many-headed, with a short, woody stock borne on several dark, rigid roots. *Leaves* suberect, grassy, linear, plainly channelled, usually up to 5 cm. in length and less than 3 mm. in breadth, pointed at the apex, the margins set with hairs, the surfaces sparsely glandular-hairy. *Scape* racemose, glabrous, glaucous, usually about 20 cm. tall, the inflorescence occupying the upper half, the lower half set with several small, linear, inconspicuous scattered bracts; the pedicels about

as long as the calyces, very sparsely glandular-hairy; floral bracts linear-lanceolate; bracteoles similar, smaller. *Calyx*, oblong-linear, glabrous, 8 mm. in length including the lobes; lobes spreading, free, blunt, about equal to the tube in length. *Corolla* deep-cream, drying to maize-yellow, tube much shorter than the calyx lobes; petals almost equal, rounded oblong, paired laterally; throat appendages 6, minute and tusk-like, sometimes shortly hairy, two of them set between three shining golden glands on the margin of the throat; labellum oval, with a long point and two slender basal appendages, twisted across one of the calyx lobes. *Column* pale, very slender, longer than the petals; anthers black, pollen whitish; stigma oval, cushion-shaped. *Capsule* oblong-linear. *Seeds* olive-brown to blackish, rough, ovoid, minute (0.3–0.35 mm. long).

Pollination by the flies *Comptosia cuneata* Edw. and *Phthiria albo-capitis* Roberts (Family *Bombyliidae*).

Epithet in allusion to the maize-colored corolla (when dry).

Vernacular name: "Maize Trigger-plant".

Habitat: In low scrub of gravelly sand heath near Wandoo trees.

Representative localities: WESTERN AUSTRALIA — Bolgart (HOLOTYPE in MEL, ISOTYPES in K and PERTH—*Rica Erickson*, 29 Sept. 1953); on sand-plain 1 mile north of Wogarl (*E. T. Bailey*, No. 142, Sept. 1945—in PERTH); Belka turn-off on Bruce Rock Road (*E. T. Bailey*, No. 381, Sept. 1947—in PERTH); Newdegate (*Dr. W. Blackall*, Nov. 1931—in PERTH).

The scape of the new species, although glabrous at the base, closely resembles that of *S. lineatum*, despite minor differences in the length of the calyx and its lobes; but the tufts of suberect, linear channelled leaves are quite distinct from the flat rosettes of broad blunt leaves in the latter species. *E. T. Bailey's* two collections from the eastern wheat belt differ from the typical form in having quite glabrous leaves.

11. *S. ADPRESSUM* Benth., *var. PATENS* Erickson & Willis, *varietas nova*.

A forma speciei usitata foliis patentibus solum recedit.

Differing from the usual form of the species in its spreading leaves. TYPE from sandy heath and *Banksia* country, a mile or so north of Yanchep, Western Australia (HOLOTYPE in MEL, ISOTYPE in PERTH—*Rica Erickson*, 4 Oct. 1954).

KEY TO ILLUSTRATIONS

PLATE I.

Figs. 1—7. *Stylidium bolgartense*: 1. Habit; 2. Longitudinal section of calyx; 3. Anthers of young flower; 4. Stigma and empty anthers of mature flower; 5. Two views of labellum; 6. Toothed upright petal; 7. Side view of flower. Figs. 8—13. *S. asteroides*: 8. Habit; 9. Throat appendages; 10. Side view of flower; 11. Labellum; 12. Anthers of young flower; 13. Stigma and empty anthers of mature flower. Figs. 14—21. *S. rubricalyx*: 14. Habit; 15. Side view of flower; 16. Throat appendages; 17. Lobes of calyx; 18. Longitudinal section of calyx; 19. Two views of labellum; 20. Side view of mature stigma and empty anthers; 21. Front view of stigma and anthers.

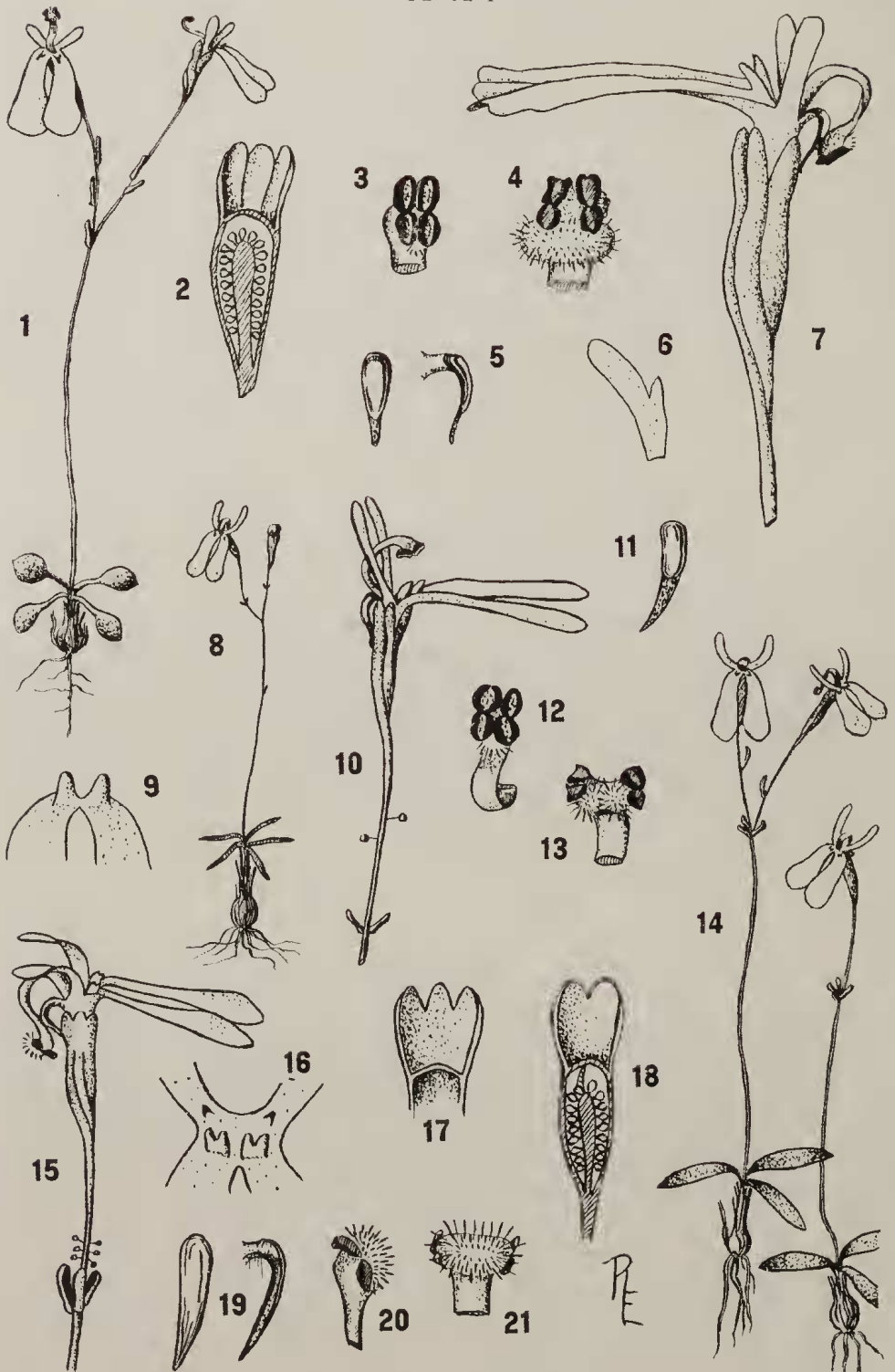
PLATE II.

Figs. 1—8. *Stylidium periscelanthum*: 1. Habit; 2. Longitudinal section of calyx; 3. Corolla; 4. Side view of flower; 5. Labellum; 6. Anthers of young flower; 7. Stigma and empty anthers of mature flower; 8. Throat appendages. Figs. 9—16. *S. rhipidium*: 9. Habit; 10. Leaves and lower stem; 11. Corolla; 12. Throat appendages; 13. Labellum; 14. Calyx; 15. Anthers; 16. Stigma of mature flower. Figs. 17—23. *S. exoglossum*: 17. Habit; 18. Corolla; 19. Calyx; 20. Leaves and lower stem; 21. Anthers; 22. Stigma and empty anthers of mature flower; 23. Side view of corolla showing labellum on outside wall of corolla tube.

PLATE III.

Figs. 1—11. *S. zeicolor*: 1. Habit; 2. Anthers; 3. Stigma and empty anthers; 4. Labellum; 5. Transverse section of leaf; 6. Flower with pedicel and bracteoles; 7. Throat of flower, showing six tusk-like appendages and three shining glands; 8. Leaf; 9. Portion of scape; 10. Longitudinal section of calyx; 11. Transverse section of calyx. Figs. 12—20. *S. xanthopis*: 12. Habit; 13. Two views of labellum; 14. Corolla showing throat appendages; 15. Calyx and floral bracts; 16. Leaf rosette and root stock; 17. Anthers; 18. Stigma; 19. Portion of scape with bract; 20. Bract.

PLATE I



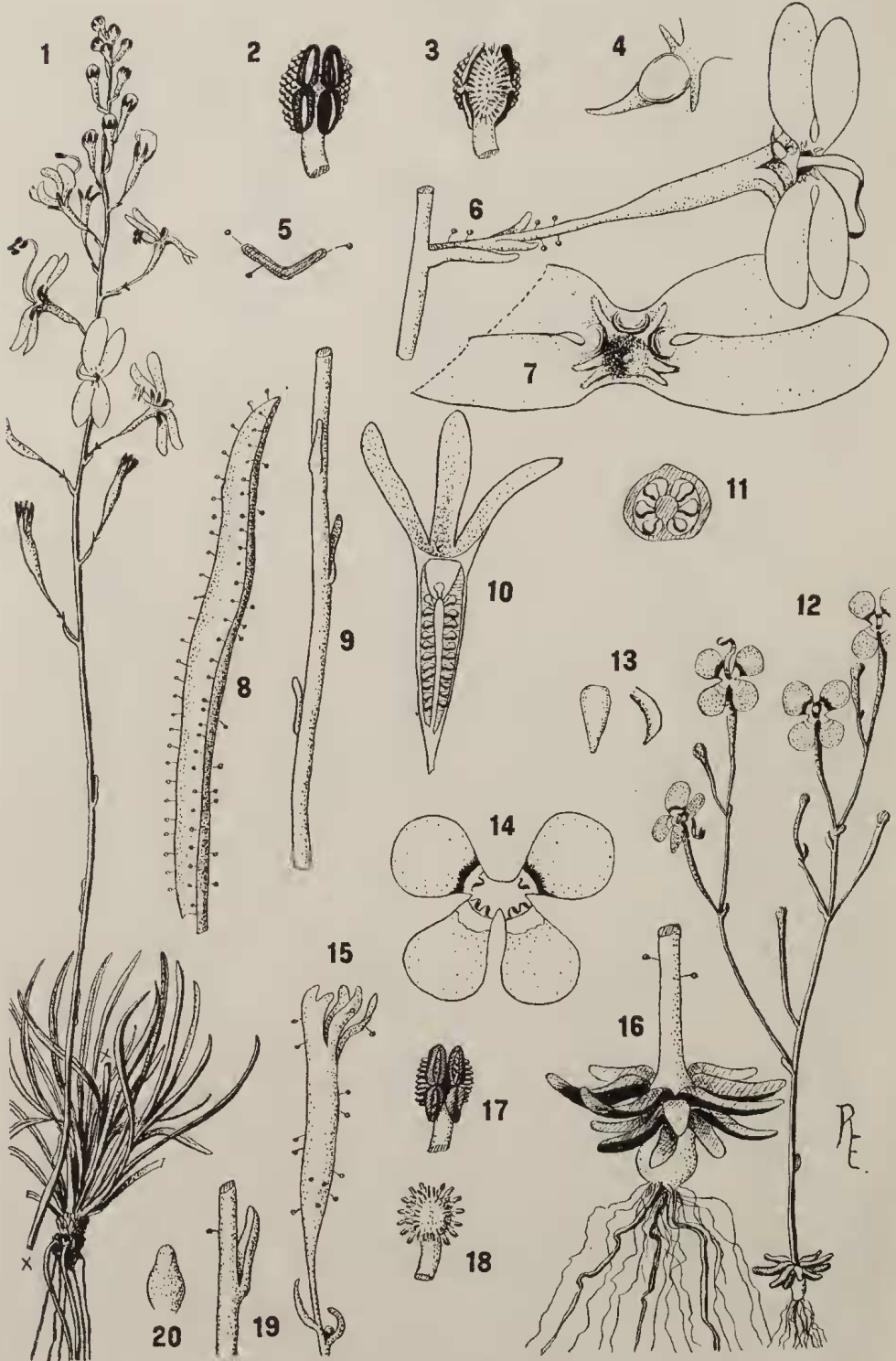
For explanation see page 17.

PLATE II.



For explanation see page 17.

PLATE III.



For explanation see page 17.